

1 REMARKS

2 Claims 1-34 are pending. Reconsideration and allowance of the pending  
3 claims is respectfully requested.

4  
5 35 U.S.C. § 102(e) Claim Rejections

6 Claims 1-34 were rejected under 35 U.S.C. § 102(e) as being anticipated by  
7 U.S. Patent No. 6,742,015 to Bowman-Amuah (hereinafter "Bowman-Amuah").  
8 The Applicant respectfully disagrees.

9 **Claim 1** recites a server system having "one or more computers" and "an  
10 application executing on the computers to handle client requests", "the application  
11 comprising: a business logic layer to process the client requests according to a  
12 particular business domain and produce replies to be returned to the clients in  
13 response to the client requests" and "a presentation layer separate from, but in  
14 communication with, the business logic layer to structure the replies in a manner  
15 that makes the replies presentable on different types of client devices." Bowman-  
16 Amuah does not disclose, teach, or suggest these aspects.

17 Bowman-Amuah describes base services patterns in a netcentric  
18 environment. Although Bowman-Amuah describes "business logic" and  
19 "presentation logic", the presentation logic of Bowman-Amuah is limited to  
20 implementation on the client, as shown by the following excerpts:

21 At a minimum, a two-tiered client/server architecture assumes  
22 that an **application's presentation logic resides on the client**  
23 and its data management logic resides on the server. *See*  
*Bowman-Amuah, Col. 33, Lines 24-27 (emphasis added).*

24 Three-tiered architecture describes a distributed application  
25 architecture in which business applications are separated into  
three logical components: presentation and control,

application logic, and data management. These logical components are "clean layered" such that each runs on a different machine or platform, and communicates with the other components via a network. See *Bowman-Amuah*, Col. 33, Lines 59-65.

As shown in the above excerpted portions, in each architecture described in *Bowman-Amuah*, the execution of the presentation logic is performed on the client. Accordingly, *Bowman-Amuah* does not disclose, teach or suggest execution of the presentation logic on a server. This argument even finds support by the Office's assertion of FIG. 10, which is provided below for convenience:

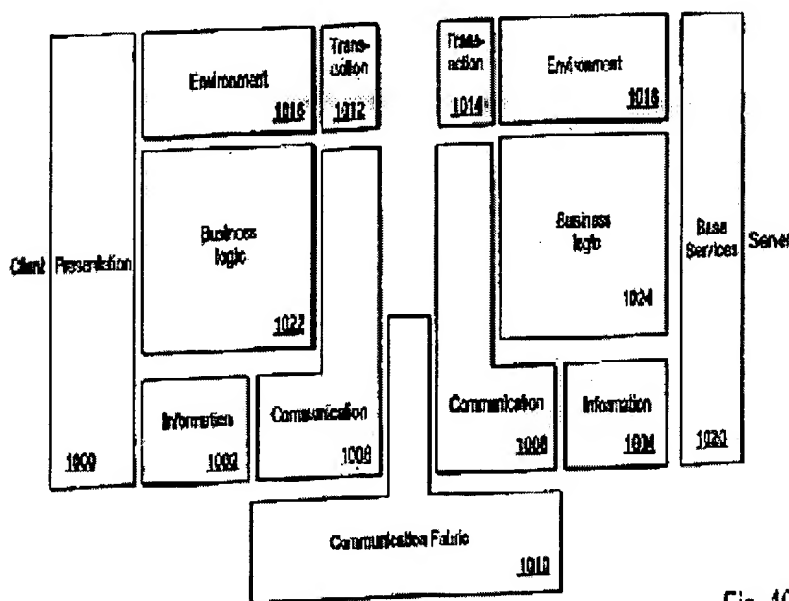


Fig. 10

As is readily apparent from FIG. 10, the presentation 1000 and Business logic 1022 of *Bowman-Amuah* are included on the client, and not on the server.

Claim 1, however, recites a "server system" having "one or more computers", and "an application executing on the computers to handle client requests" having "a business logic layer to process the client requests" and "a presentation layer separate from, but in communication with, the business logic

1 layer to structure the replies in a manner that makes the replies presentable on  
2 different types of client devices.”

3 The Office asserts the following in the “Response to Arguments” section of  
4 the Final Office Action:

5 Bowman-Amuah discloses a presentation layer separate from  
6 (presentation and business logic are loosely coupled, elements  
7 fig 122, col 248, lines 6-10), but in communication with (web  
8 server is in communication with organization application,  
9 application includes business logic, col 44, lines 63-67 and  
10 col 45, lines 1-5, col 107, lines 22-67), the business logic  
11 layer to structure the replies in a manner that makes the  
12 replies presentable on different types of client devices  
13 (elements, fig 124, thin client, browser, runs on different  
14 devices, fat clients, fig 10, col 32, lines 45-63, col 27, lines 5-  
15 12). *Final Office Action Dated February 15, 2005, Page 13.*

16 The Applicant respectfully disagrees. The portions of Bowman-Amuah asserted  
17 by the Office are excerpted as follows:

18 The way that Presentation Services interact with client-side  
19 business logic is very important to the overall scalability and  
20 maintainability of the application. An application’s business  
21 logic is expected to be highly reusable, even on the client.  
22 Bowman-Amuah, Col. 248, Lines 6-10.

23 As shown in this excerpt, Bowman-Amuah describes presentation services  
24 interacting with “client-side business logic”. However, Claim 1 recites an  
25 application having “business logic layer” and a “presentation layer ... to structure  
the replies in a manner that makes the replies presentable on different types of  
client devices”.

The Office then asserts the following excerpt from Bowman-Amuah for  
“communication”:

1 Web3270--a plug-in from Information Builders that allows  
2 mainframe 3270-based applications to be viewed across the  
3 Internet from within a browser. The Web3270 server provides  
4 translation services to transform a standard 3270 screen into  
5 an HTML-based form. Interest in Web3270 and similar plug-  
6 ins has increased with the Internet's ability to provide  
7 customers and trading partners direct access to an  
8 organizations applications and data. Screen scraping plug-ins  
9 can bring legacy applications to the Internet or intranet very  
10 quickly. *Bowman-Amuah, Col. 44, Lines 63 to Col. 45, Line*  
11 *5.*

12 The above excerpt merely describes viewing applications using a browser.  
13 Therefore, these two excerpts describe presentation services and client-side  
14 business logic on a client and a plug-in that allows a browser to view an  
15 application over the Internet.

16 The Office then asserts the following excerpts for "web server is in  
17 communication with organization application, application includes business  
18 logic". *Final Office Action Dated February 15, 2005.*

19 Web Server Services enable organizations to manage and  
20 publish information and deploy Netcentric applications over  
21 the Internet and intranet environments. These services support  
22 the following:

23 Managing documents in most formats such as HTML,  
24 Microsoft Word, etc. Handling of client requests for HTML  
25 pages. A Web browser initiates an HTTP request to the Web  
server either specifying the HTML document to send back to  
the browser or the server program (e.g., CGI, ASP) to  
execute. If the server program is specified, the Web server  
executes the program which generally returns a formatted  
HTML page to the Web Server. The Web server then passes  
this HTML page just as it would any standard HTML  
document back to the Web browser.

Processing scripts such as Common Gateway Interface (CGI),  
Active Server Pages (ASP). Server side scripting enables  
programs or commands to be executed on the server machine  
providing access to resources stored both inside and outside  
of the Web server environment. For example, server side

1 scripts can be used to process requests for additional  
information, such as data from an RDBMS.

2 Caching Web pages. The first time a user requests a Web  
page, the Web server retrieves that page from the network and  
3 stores it temporarily in a cache (memory on the Web server).  
When another page or the same page is requested, the Web  
4 server first checks to see if the page is available in the cache.  
If the page is available, then the Web server retrieves it from  
5 the cache, otherwise it retrieves it from the network. Clearly,  
the Web server can retrieve the page from the cache more  
6 quickly than retrieving the page again from its location out on  
the network. The Web server typically provides an option to  
7 verify whether the page has been updated since the time it  
was placed in the cache, and if it has to get the latest update.

#### 8 Possible Product Options

9 Netscape Enterprise Web Server; Microsoft Internet  
Information Server (IIS); Oracle WebServer.

10 The following are relevant products for providing or  
implementing HTTP Web Server Services:

#### 11 Netscape Enterprise Web Server

12 An enterprise-strength Web server that enables organizations  
to manage and publish their information and deploy  
13 Netcentric applications. *Bowman-Amuah, Col. 107, Lines 20-  
14 66.*

15 The above asserted portion of Bowman-Amuah, however, merely describes  
16 passing of web pages, "just as it would any standard HTML document back to the  
17 Web browser". *Bowman-Amuah, Col. 107, Lines 34-35.* Although Bowman-  
18 Amuah describes a "fat client" and a "thin client", this reference does not disclose,  
19 teach or suggest "structuring the replies in a manner that makes the replies  
20 presentable on different types of client devices". Rather, Bowman-Amuah merely  
21 describes a standard HTML document communicated for viewing by a browser  
22 and makes no mention of structuring of the replies as recited in Claim 1.

23 The Office also asserts FIG. 122 for support of "loosely coupled"  
24 presentation and business logic, the asserted figure is reproduced as follows:  
25

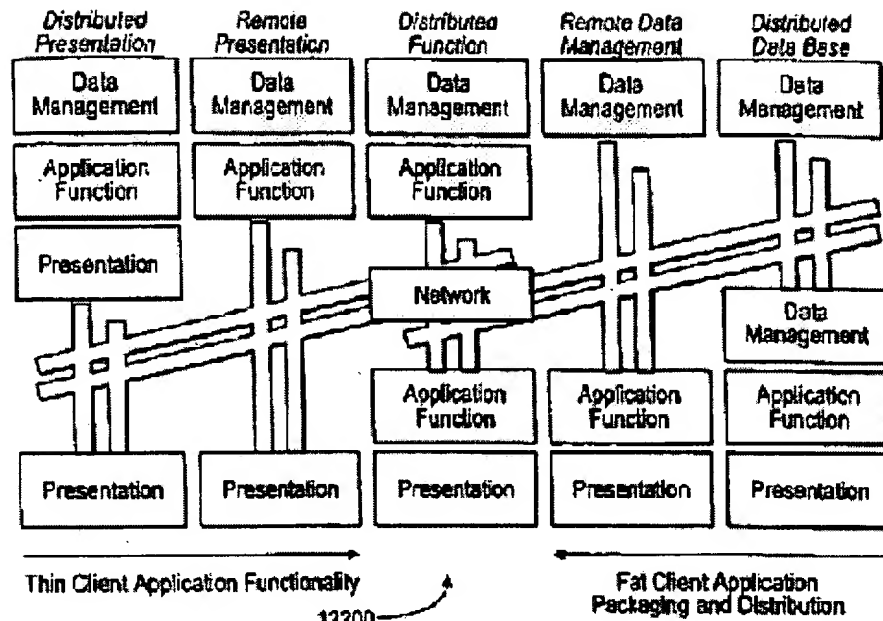


Fig. 122

FIG. 122 shows presentation boxes separated by a network under the heading "distributed presentation". However, nowhere in the text of Bowman-Amuah is this arrangement discussed. It is not apparent from the figure what is being accomplished under this heading. Indeed, the words "distributed presentation" do not even appear in the text of Bowman-Amuah. Therefore, it is respectfully submitted that FIG. 122 provides no guidance as to the recited features of Claim 1.

Accordingly, for at least these reasons, Claim 1 is not anticipated nor rendered obvious by Bowman-Amuah and withdrawal of the rejection is respectfully requested.

**Claims 2-11** are dependent claims which depend either directly or indirectly from claim 1. Accordingly, these claims are allowable for at least this reason. Additionally, these claims are also allowable for their own recited features, which are not disclosed, taught or suggested by Bowman-Amuah.

1       **Claim 5**, for instance, recites “wherein the different types of client devices  
2 support different data formats, the presentation layer being configured to select  
3 appropriate data formats for encoding the replies”. The Office references a  
4 portion of Bowman-Amuah for such disclosure, which is excerpted as follows:

5               The number of tiers in NCC and traditional client/server  
6 systems is different. NCC extends the traditional two-tier  
7 client/server architecture to a n-tier architecture.

8               The client in NCC systems is different from a client in  
9 traditional client/server systems. The client in a NCC system  
10 is a standardized universal one; a NCC application can  
11 execute within a client that can run on multiple operating  
12 systems and hardware platforms. In traditional client/server  
13 systems, the client is custom-made for a specific operating  
14 system and hardware platform.

15              The way in which NCC and traditional client/server systems  
16 can be extended and adapted is different. Components enable  
17 NCC systems to be adaptable to a variety of distribution  
18 styles, from a "thin client" to a "fat client". In comparison,  
19 traditional client/server systems, once designed and built,  
20 cannot be adapted for use on more than one computing style.

21              Tiers

22              Similarly to traditional client/server architectures, Netcentric  
23 architectures support a style of computing where processes on  
24 different machines communicate using messages.

25       Neither this referenced portion, nor the other referenced portion cited by the  
Office disclose, teach or suggest the above recited features of Claim 5. Indeed, the  
asserted portion of Bowman-Amuah does not even include the word “format”.  
Further, as before, the referenced portion of Bowman-Amuah is again limited to  
execution on the client and does not disclose, teach or suggest execution on the  
server. Accordingly, Claim 5 is not anticipated by Bowman-Amuah and  
withdrawal of the rejection is respectfully requested.

**Claim 6** recites “wherein the different types of client devices support  
different communication protocols, the presentation layer being configured to

1 select appropriate communication protocols for delivering the replies to the  
2 clients”, which is not disclosed, taught or suggest by Bowman-Amuah. The  
3 Office asserts the following portion of Bowman-Amuah for such teaching:

4 Will the tool be used with a large development team?  
5 If the development team is more than 5 people, a tool should  
6 provide support for multiple developers. This support  
7 includes features such as object check-in/check-out, a central  
8 design repository for the storage of application objects and  
9 user interface definitions, and version control. Additionally,  
10 the development team should be able to cleanly divide the  
11 application(s) into pieces which can be worked on by multiple  
12 people.

13 What protocols are used to communicated with the database?  
14 Important considerations include the supported databases and  
15 protocols used to communicated with the databases. The tool  
16 must support the selected database. Additionally, if the  
17 database selection may change, it is important that the tool  
18 have the ability to support other databases with minimal  
19 impact on the application development. Native database  
20 interfaces tend to have better performance than open  
21 standards such as ODBC.

22 Will the design tool be used for programming of client  
23 applications? What programming language is supported?  
24 *Bowman-Amuah, Col. 37, Lines 45-67.*

25 As shown in the above excerpted portion, Bowman-Amuah merely describes use  
of a tool by an application development team that “may have the ability to support  
other databases with minimal impact on the application development”. *Bowman-*  
*Amuah, Col. 37, Lines 60-61.* Nowhere in the asserted portion does Bowman-  
Amuah disclose that the tool is “configured to select appropriate communication  
protocols for delivering the replies to the clients” like the presentation layer of the  
application recited in Claim 6. Accordingly, Claim 6 is not anticipated by  
Bowman-Amuah and withdrawal of the rejection is respectfully requested.



1       **Claim 9** recites “a tag library containing pre-constructed tags for a variety  
2 of data formats” and “a request dispatcher to structure a reply for service back to a  
3 client device, the request dispatcher being configured to access the tag library to  
4 obtain tags to structure the reply according to a particular data format” which is  
5 not disclosed, taught or suggested by Bowman-Amuah. The Office references  
6 portions of Bowman-Amuah for such disclosure. However, the asserted portions  
7 merely describe basic functionality of HTML and does not disclose “tags to  
8 structure the replay according to a particular data format” as recited in Claim 9.  
9 Accordingly, Claim 9 is allowable for at least this reason and withdrawal of the  
10 rejection is respectfully requested.

11       **Claim 10** is dependent on Claim 9 and further recites “wherein the request  
12 dispatcher is configured to select a communication protocol to be used to serve the  
13 replay back to the client device”. As previously described, the request dispatcher  
14 is a part of the presentation layer, which is a part of the application executing on  
15 the computer to handle client requests of Claim 1. The asserted portions of  
16 Bowman-Amuah, however, merely recite middleware that “allows the client  
17 application to access any service on any physical server in the network without  
18 needing to know where it is physically located”. *Bowman-Amuah, Col. 57, Lines*  
19 *47-49*. Accordingly, withdrawal of the rejection is respectfully requested.  
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1       **Claim 12** recites “[i]n a server application that receives client requests for a  
2 problem domain and has at least one problem solving module to generate replies  
3 to be served back to clients, a presentation module separate from the problem  
4 solving module” having “a presentation component to construct how a reply will  
5 appear” and “a rendering component to configure how the reply is output on a  
6 particular client” which is not disclosed, taught or suggested by Bowman-Amuah.

7       The Office asserts the following excerpts of Bowman-Amuah for disclosure  
8 of the above recited features:

9               The Netcentric Architecture Framework identifies those run-  
10 time services required when an application executes in a  
11 Netcentric environment. As shown in FIG. 10, the services  
12 can be broken down into logical areas: Presentation Services  
13 1000, Information Services 1002,1004, Communication  
14 Services 1006,1008, Communication Fabric Services 1010,  
Transaction Services 1012,1014, Environment Services  
15 1016,1018, Base Services 1020 and Business Logic  
16 1022,1024. *See Bowman-Amuah, Col. 31, Lines 52-60.*

17               Presentation Services enable an application to manage the  
18 human-computer interface. This includes capturing user  
19 actions and generating resulting events, presenting data to the  
20 user, and assisting in the management of the dialog flow of  
21 processing. FIG. 13 illustrates several components of the  
22 Presentation area of the Netcentric Architecture Framework.  
23 *See Bowman-Amuah, Col. 34, Lines 62-67.*

24               Three-tiered architecture describes a distributed application  
25 architecture in which business applications are separated into  
three logical components: presentation and control,  
application logic, and data management. These logical  
components are "clean layered" such that each runs on a  
different machine or platform, and communicates with the  
other components via a network. *See Bowman-Amuah, Col.*  
*33, Lines 59-65.*

1 However, as shown in the above excerpts and elsewhere in Bowman-Amuah, the  
2 presentation logic in Bowman-Amuah is executed on the client, an example of  
3 which is shown in corresponding FIG. 10 of Bowman-Amuah which is reproduced  
4 above.

5 Thus, as stated above in relation to Claim 1, Bowman-Amuah limits  
6 execution of the presentation logic to the client. However, Claim 12 recites “a  
7 server application” having “a presentation component” and “a rendering  
8 component to configure how the reply is output on a particular client” which is not  
9 disclosed, taught or suggested by Bowman-Amuah. Accordingly, for at least these  
10 reasons, Claim 12 is not anticipated by Bowman-Amuah and withdrawal of the  
11 rejection is respectfully requested.

12 **Claims 13-17** are dependent claims which depend either directly or  
13 indirectly from claim 12. Accordingly, these claims are allowable for at least this  
14 reason. Additionally, these claims are also allowable for their own recited  
15 features, which are not disclosed, taught or suggested by Bowman-Amuah. For  
16 example, Claim 16 recites “wherein the clients support different communication  
17 protocols, the presentation component being configured to select an appropriate  
18 communication protocol **for delivering the reply to the particular client.**”  
19 (*emphasis added*). The presentation logic of Bowman-Amuah, however, is limited  
20 to execution on the client. These claims are also allowable for the previously  
21 recited reasons. For example, Claims 15, 16 are allowable based on similar  
22 reasoning as previously described for respective claims 5 and 6. Accordingly,  
23 withdrawal of the rejections with respect to Claims 13-17 is respectfully requested.  
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1       **Claim 18** recites a computer software architecture embodied on one or  
2 more computer-readable media, comprising:

- 3           • a presentation tier to determine how data for communication to a  
4           client device is to be presented on the client device; and
- 5           • a rendering tier, separate from the presentation tier, to determine  
6           how to render the data on the client device.

7       As previously described in relation to Claims 1 and 12, Bowman-Amuah limits  
8 execution of the presentation logic on the client. Accordingly, Claim 18 is  
9 allowable over Bowman-Amuah. Withdrawal of the rejection is respectfully  
10 requested.

11       **Claims 19-23** are dependent claims which depend directly from claim 18.  
12 Accordingly, these claims are allowable for at least this reason. Additionally,  
13 these claims are also allowable for their own recited features, which are not  
14 disclosed, taught or suggested by Bowman-Amuah. For example, Claim 22  
15 recites “wherein the presentation tier comprises multiple dispatchers, each  
16 dispatcher being configured to package the data according to a particular  
17 communications protocol” which is not disclosed, taught or suggested by  
18 Bowman-Amuah. Claim 23 is allowable based on similar reasoning as was  
19 previously discussed in relation to Claim 9. Therefore the Applicant will not  
20 further burden the record by repeating the arguments. Accordingly, withdrawal of  
21 the rejections with respect to Claims 19-23 is respectfully requested.

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1       **Claim 24** recites an architecture comprising “a tag library containing pre-  
2 constructed tags for a variety of data formats”, “multiple request dispatchers to  
3 structure replies to be returned to client devices in response to requests submitted  
4 by the client devices, individual request dispatcher formatting data according to  
5 particular formats that are supported by the client devices”, and “content renderer  
6 to conform the replies to output capabilities of the client devices to which the  
7 replies are to be returned”. Bowman-Amuah does not disclose, teach or suggest  
8 these aspects. The Office references various sections of Bowman-Amuah (e.g.,  
9 FIG. 10 as reproduced above, columns 249-250, and column 72, lines 20-25) for  
10 teaching the “multiple request dispatchers” recited above. However, these  
11 sections merely describe various standards, such as RTP. Claim 24, however,  
12 recites “multiple request dispatchers” such that an “individual request dispatcher  
13 formatting data according to particular formats that are supported by the client  
14 devices” which is not disclosed, taught or suggested by Bowman-Amuah.  
15 Accordingly, Claim 24 is not anticipated by Bowman-Amuah and withdrawal of  
16 the rejection is respectfully requested.

17       **Claims 25-26** are dependent claims which depend directly from claim 24.  
18 Accordingly, these claims are allowable for at least this reason. Additionally,  
19 these claims are also allowable for their own recited features, which are not  
20 disclosed, taught or suggested by Bowman-Amuah. For example, Claim 25  
21 recites “wherein individual request dispatchers are further configured to select  
22 communication protocols to be used to serve the replies back to the client devices”  
23 which is not disclosed, taught or suggested by Bowman-Amuah. Claim 25 is  
24 allowable based on similar reasoning as previously discussed in relation to Claim  
25 10. Therefore the Applicant will not further burden the record by repeating the

1 arguments. Accordingly, withdrawal of the rejections with respect to Claims 25-  
2 26 is respectfully requested.

3 **Claim 27** recites a method comprising:

- 4 • receiving a reply generated by a server application in response to a  
5 client request;
- 6 • structuring the reply to define how the reply will appear when  
7 communicated to and presented at the client; and
- 8 • independent of said structuring, conforming the reply to output  
9 capabilities of the client.

10 As previously described in relation to Claims 1 and 12, execution of the  
11 presentation logic in Bowman-Amuah is limited to being performed on the client.  
12 Accordingly, Claim 27 is allowable over Bowman-Amuah. Withdrawal of the  
13 rejection is respectfully requested.

14 **Claims 28-32** are dependent claims which depend directly from claim 27.  
15 Accordingly, these claims are allowable for at least this reason. Additionally,  
16 these claims are also allowable for their own recited features, which are not  
17 disclosed, taught or suggested by Bowman-Amuah. For example, Claim 32  
18 recites “wherein the configuring comprising sizing the reply for a display at the  
19 client” which is not disclosed, taught or suggested by Bowman-Amuah.  
20 Accordingly, withdrawal of the rejections with respect to Claims 28-32 is  
21 respectfully requested.

1       **Claim 33** recites one or more computer-readable media comprising  
2 computer-executable instructions that, when executed, direct an application server  
3 to:

- 4       • generate replies in response to client requests, the client requests  
5       being submitted by diverse client devices that support different data  
6       formats and different communication protocols; and
- 7       • structure the replies to define how the replies will appear when  
8       communicated to and presented on the client devices and  
9       independently form individual replies for output capabilities of the  
10      client devices so that the replies are encoded to comply with the data  
11      formats supported by the client devices and are sent using the  
12      communication protocols of the client devices.

13      As previously described in relation to Claims 1 and 12, Bowman-Amuah limits  
14      execution of the presentation logic on the client. Accordingly, Claim 33 is  
15      allowable over Bowman-Amuah. Withdrawal of the rejection is respectfully  
16      requested.

17       **Claim 34** is a dependent claim which depends directly from claim 33.  
18      Accordingly, this claim is allowable for at least this reason. Additionally, this  
19      claim is also allowable for its own recited features, which are not disclosed, taught  
20      or suggested by Bowman-Amuah. Accordingly, withdrawal of the rejection with  
21      respect to Claim 34 is respectfully requested.

Conclusion

All objections and rejections raised in the Office Action have been addressed. Accordingly, it is respectfully submitted that the present application is in condition for allowance and such allowance is respectfully solicited. The Examiner is urged to contact the undersigned if any issues remain unresolved by this response.

Respectfully Submitted,

Dated: 4/15/05

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